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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/451,746	11/30/1999	CARLO VERTEMARA	99-S-096(167	9456

30431 7590 12/13/2004

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EXAMINER	
WONG, KIN C	

ART UNIT	PAPER NUMBER
2651	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/451,746	VERTEMARA ET AL.	
	Examiner	Art Unit	
	K. Wong	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,16-22 and 24-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16-22 and 24-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is a response to amendment filed on 2/19/04.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims (1-13, 16-22 and 24-37) are rejected under 35 U.S.C. 102(e) as being anticipated by Brito et al (6040671).

Regarding claim 1: Brito et al discloses a control circuit (element 12 in figure 4 of Brito et al) for controlling a motor (actuator motor - element 10 in figure 4 of Brito et al) assembly having a coil with first element 94 in figure 4) and second nodes (element 96 in figure 4) and having a movable arm (element 20 in figure 1), the control circuit including:

a drive circuit (element 108 in figure 4) operable to be coupled to the first and second nodes of the coil (as depicted in figure 4), to receive a control signal and speed signal (velocity), to generate a drive signal in response to the control and speed signals, and to drive the coil with the drive signal in response to the control and speed signals, to drive the coil with the drive signal during drive periods, and to uncouple (or interrupt) the drive signal from the coil during measurement period that alternate with and are separate from the drive periods (col. 4, lines 34-44 of Brito et al); and

a sensor circuit (element 116 in figure 4) coupled to the drive circuit and having first and second sensor nodes operable to be respectively coupled to the first and second nodes of the coil such that no element is in series with the coil between the first and second sensor nodes, the sensor circuit operable to generate the speed signal having a level that corresponds to the speed of the arm (as depicted in figure 4, and, see col. 5, lines 34 to col. 6, line 15 and col. 8, lines 11-50 of Brito et al).

Regarding claim 2: Brito et al teaches that wherein the sensor circuit is operable to generate the speed signal by sensing a back voltage (back-emf) across the coil during a portion of each measurement period when substantially zero current is flowing through the coil and by generating the level of the speed signal such that the level corresponds to the sensed back voltage (in col. 4, lines 34-44 of Brito et al).

Regarding claim 3: Brito et al depicts in figure 5 that wherein the drive circuit is operable to accelerate the arm to a predetermined speed and to maintain the arm at approximately the predetermined speed for a predetermined time period (see associated descriptions for details).

Regarding claim 32, in control circuit of claim 1: Brito et al teaches that wherein the drive signal is nondithered (in col. 4, line 45 to col. 5, line 10 of Brito et al as inline with the instant specification on page 9, line 8 to page 10, line 11).

Regarding claim 33, in control circuit of claim 1: the limitations of herein the drive signal is operable to move a portion of the moveable arm at a speed of approximately five inches per second are considered inherent within the reference because Brito et al in col. 10, lines 36-42 describes the activating period with for driving the actuator which

could be translated into distance per unit time that would included the noted speed range.

Regarding claim 4: Brito et al discloses a control for controlling a read-write head assembly during a park or unpark operation (col. 11, lines 11-18 of Brito et al), the head assembly including a motor assembly having a coil and a movable arm, the head assembly also including a read-write head couple to the arm (as depicted in figure 1), the control circuit (as depicted in figure 4) including:

a drive circuit (element 108) operable to receive a control signal and a speed signal, to generate a drive signal in response to the control and speed signals during drive periods and to uncouple (or interrupt) the drive signal from the coil during measurement periods that alternate with and are separate from the drive periods such that the read-write head moves to or from a ramped parking platform (element 32 in figure 2) at a speed that is approximately five inches per second for a predetermined time period (the limitations of 5 in/sec are considered inherent within the reference because in col. 10, lines 36-42 where Brito et al describes the activating period with voltage for driving the actuator which could be translated into distance per unit time that would included the noted speed range); and

a sensor circuit (element 116) couple to the drive circuit and operable to sense the speed of the read-write head during the measurement periods and to generate the speed signal having a level that corresponds to the sensed speed of the read-write head (as depicted in figure 4 and see associated descriptions for details).

Regarding claim 5: Brito et al depicts element 98 in figure 4 that wherein the drive circuit is operable to generate the drive signal in response to the sum of the control and speed signals.

Regarding claim 6: Brito et al teaches that wherein the sensor circuit (element 116) is operable to sense the speed of the read-write head by sensing a back voltage across the coil during a portion of each measurement period when approximately zero current is flowing through the coil (in col. 4, lines 34-44 of Brito et al).

Regarding claim 7: Brito et al teaches that wherein the sensor circuit (element 116) is operable to:

sense the speed of the read-write head by sensing a back voltage across the coil; and

generate the speed of the read-write head by generating an intermediate signal from the sensed back voltage, sampling the intermediate signal during a portion of each measurement period when substantially zero current is flowing through the coil, and generating the level of the speed signal such that the level corresponds to the sampled intermediate signal (in col. 4, lines 34-44 of Brito et al).

Regarding claim 8: Brito et al discloses a control circuit for controlling a read-write head assembly that includes a motor assembly having a post (element 26 in figure 1), an arm having first and second ends and a midsection pivotally mounted to the post (as depicted in figure 1), and a coil operable to move the first end of the arm, the read-write head assembly also including a read-write head coupled to the second end of the arm, the control circuit including:

a drive circuit having a control input terminal, a feedback input terminal, and a first output terminal that is operable to be coupled to a first terminal of the coil (as depicted in elements 98/100/102/104/106/108 of figure 4); and

a speed-sense circuit (element 116) having first (elements 110/94 in figure 4) and second (elements 112/96 in figure 4) input terminals that are operable to be directly coupled to the first terminal and a second terminal of the coil such that no element is in series with the coil between the first and second input terminals, the speed-sense circuit also having an output terminal coupled to the feedback input terminal (element 122 in figure 4) of the drive circuit, the speed-sense circuit operable to sense a speed of the arm during measurement periods when substantially zero current flows through the coil (see col. 4, lines 34-44 of Brito et al).

Regarding claim 9: Brito et al teaches that wherein the control and feedback input terminals are couple together (in col. 5, lines 1-10 of Brito et al).

Regarding claim 10: Brito et al further teaches that a switch (element 120) coupled between the feedback input terminal and the output terminal of the speed-sense circuit (see col. 5, lines 1-10 and col. 5, lines 44-56 of Brito et al).

Regarding claim 11: Brito et al depicts element 96 in figure 4 wherein the drive circuit includes a second output terminal operable to be coupled to a second terminal of the coil.

Regarding claim 34, in control circuit of claim 8: Brito et al teaches that wherein the drive circuit is operable to drive the coil with a linear signal (in col. 4, line to col. 5, line 10 of Brito et al).

Regarding claim 35, in control circuit of claim 8: the limitations of herein the drive circuit is operable to cause the read-write head to move at a speed of approximately five inches per second are considered inherent within the reference because Brito et al in col. 10, lines 36-42 describes the activating period with for driving the actuator which could be translated into distance per unit time that would included the noted speed range.

Regarding claim 12: Brito et al discloses a disk-drive system, including:

a disk having a peripheral edge and a surface (as depicted in figure 2);

a platform (element 32 in figure 2) disposed adjacent to the peripheral edge of the disk and raised with respect to the disk surface (as illustrated in figure 2);

a coil (element 22 in figure 1);

an arm (element 20 in figure 1);

a read-write head (element 34 in figure 1) coupled to the arm (as showed in figure 1); and

a nondithering control circuit (col. 4, line 45 to col. 5, line 10 as inline with the instant specification on page 9, line 8 to page 10, line 11) coupled to the coil and operable to cause the coil to park the read-write head by sensing a speed of the arm during measurement periods when substantially zero current flows through the coil (col. 4, lines 34-44), and, in response to the sensed speed, moving the read-write head from over the disk onto the platform at approximately a constant speed (col. 6, lines 30-37).

Regarding claim 13: Brito et al depicts in figure 2 that wherein the platform (element 32) has a ramped side (element 42) that faces the disk (element 36).

Regarding claim 16: the limitations of wherein the constant speed equals approximately five inches per second are considered inherent within the reference because Brito et al in col. 10, lines 36-42 describes the activating period with for driving the actuator which could be translated into distance per unit time that would included the noted speed range.

Regarding claim 17: Brito et al further depicts in figure 1 that including: a post; the arm having a first end magnetically coupled to the coil, having a second end, and having a midsection pivotally mounted to the post; and the read-write coupled to the second end of the arm.

Regarding claim 18: Brito et al further depicts in figure 1 that a post; the arm having a first and second ends and having a midsection pivotally mounted to the post; the coil mounted to the first end of the arm; and the read-write head coupled to the second end of the arm.

Regarding claims 19-26 and 36: method claims (19-26 and 36) are drawn to the method of using the corresponding apparatus claimed in claims (12-13 and 16-18). Therefore method claims (19-26 and 36) correspond to apparatus claims (12-13 and 16-18) and are rejected for the same reasons of anticipation as used above.

Regarding claims 27-29: method claims (27-29) are drawn to the method of using the corresponding apparatus claimed in claims (1-3, 32-33, 12-13 and 16-18). Therefore method claims 27-29 correspond to apparatus claims (1-3, 32-33, 12-13 and 16-18) and are rejected for the same reasons of anticipation as used above.

Regarding claim 30: method claim (30) is drawn to the method of using the corresponding apparatus claimed in claim 12. Therefore method claim (30) corresponds to apparatus claim 12 and are rejected for the same reasons of anticipation as used above.

Regarding claims 31 and 37: method claims (31 and 37) are drawn to the method of using the corresponding apparatus claimed in claims (8-11 and 34-35). Therefore method claims (31 and 37) correspond to apparatus claims (8-11 and 34-35) and are rejected for the same reasons of anticipation as used above.

Response to Arguments

Applicant's arguments filed 2/19/04 have been fully considered but they are not persuasive because they are directed to the newly amended claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (703) 305-7772.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kw

1 Dec 04

SINH TRAN
PRIMARY EXAMINER